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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,557	11/30/2001	Mamoru Oguro	2000-367314US	3829
21254	7590	08/10/2004	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			HEALY, BRIAN	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,557

Applicant(s)

OGURO, MAMORU

Examiner

Brian M. Healy

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 4-11 is/are allowed.
6) ☒ Claim(s) 1-3 and 12-25 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08062004.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

Claims 4-11 are allowed. None of the prior art references teaches or suggests the optical coupling part having a refractive index matching resin with the limitations of claim 1 and the Y-branching waveguide arrangement used in conjunction with the limitations of claim 1 and the first and second spot-size conversion regions. See amended claims 4-8 for specific details.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurata et. al., U.S.P. No.5,392,372.

Kurata et. al. teaches (Figs.1-8) an optical module (and method of forming same) for coupling to an optical active element comprising: an optical waveguide fiber element 1 that is coupled to an active semiconductor element 3 (this can be a light source or detector) via an optical coupling part that includes an index matching resin 5 that is positioned between the end of the fiber and the optical active element that clearly, fully meets Applicant's claimed limitations.

Art Unit: 2883

Claims 12,13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Greer, U.S.P. No.4,182,545.

Greer teaches (Figs.1-3) an optical module for coupling to an optical active (photo detector) element 20,14 using an optical coupling part 25 made from an index matching resin and couples light to an optical waveguide 38, which clearly, fully meets Applicant's claimed limitations.

Claims 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirai et. al., U.S.P. No. 5,481,632.

Hirai 632' teaches (Figs.1-16) an optical module comprising: a Y-branch single mode optical waveguide section 2 with each waveguide section being adapted to be coupled to an optical active element (While a light source 14 is shown, it is clear that this light source is only temporary till sections using UV curable adhesive are cured; the use of other active elements, i.e. photodetectors and light emitters are inherent to the use of any waveguide device) and an optical coupling part 11 that includes an index matching resin, which clearly, fully meets Applicant's claimed limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai, U.S.P. No.5,481,632 in view of Booth, U.S.P. No.5,098,804.

The teachings of Hirai '632 have already been discussed. Hirai does not teach the use of a wavelength separating means in a Y-branching optical waveguide arrangement.

Booth 804' teaches (Figs.1-16) the use of a grating means 60 placed before a Y-branching single mode waveguide section 5 and between another single mode waveguide section 7 for the purpose of wavelength separating multiplexing /demultiplexing between active elements 70,72,74 (photodetectors or light emitters).

Because both Hirai 632' and Booth 804' are from the same field of endeavor, i.e. optical Y-branch devices, the purpose of using the grating before the Y branch waveguide section for wavelength filtering, as is taught by Booth 804' would have been recognized in the pertinent prior art of Hirai 632'.

It would have been obvious at the time the invention was made to a person having ordinary skills in the art to modify the Y-branching device of Hirai '632 so that a wavelength separating means used in conjunction with a Y-branched waveguide arrangement, as is taught by Booth 804' for the purpose of low loss wavelength separating in an optical system.

Claims 1-3 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto, U.S.P. No.6.037,189 in view of Kurata et. al., U.S.P. No. 5,392,372.

Goto 189' teaches (Figs.1-16) an integrated optical module device and method of forming same comprising: an optical active element 4,42,42A that can be either a laser

Art Unit: 2883

diode or a photodetector that includes a waveguide 42b with a spot-size conversion region that reduces (or increases if the direction of light is towards the photodetector) the width or thickness of the waveguide resulting in an altered spot size. Goto 189' does not teach the optical waveguide is formed separately from the optical active element.

The teachings of Kurata 372' has already been discussed. The waveguide 1 is formed separately from the optical element 3,4, for the purpose of optical coupling.

Since Goto 189' and Kurata 372' are from the same field of endeavor, i.e. optical modules, the purpose of forming an optical waveguide separable from an optical element, as is taught by Kurata 372', would have been recognized in the pertinent art of Goto 189'.

Applicant's attention should also be drawn to In re Dulberg, 129 U.S.P. Q. 348 which states that it would be obvious to make device components separable.

It would have been obvious at the time the invention was made to a person having ordinary skills in the art to modify the optical module device and method of forming same as was taught by Goto by making a waveguide formed separable from an optical active element as is taught by Kurata 372 or would be an obvious engineering expedient as is taught by In re Dulberg, for the purpose of forming and using an optical module device.

A copy of PTO-1449 will be included in this office action.

Response to Arguments

Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments concerning the

separately formed waveguide and optical active element have been fully addressed in the rejections listed in this office action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. Healy whose telephone number is (571)272-2347. The examiner can normally be reached on Compressed Schedule Tues-Thurs. 7AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571)272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian M. Healy
Primary Examiner
Art Unit 2883



Brian Healy
Primary Examiner